

# **VII. ROAD, UTILITY AND BUILDING INVENTORY**

## **INTRODUCTION**

This chapter includes a brief description of Raven Rock State Park's roads, utilities and buildings and structures and makes general recommendations based on a one-day inspection of the park facilities conducted on April 11, 2005 by Facility Engineering Specialist Glenn Sheppard with Park Superintendent Paul Hart, Maintenance Mechanic Wayne Rouse, Capital Improvement Coordinator Bruce Garner and Planner Kim Huband. Other information comes from the 1992 *Raven Rock State Park Draft General Management Plan*, the Institute for Transportation, Research, and Education's (ITRE) study on roads, and information provided by Alan Jeffreys, Engineering Specialist.

The inventory is divided into six major sections: roads and parking areas; water system; sewer system; electrical system; telephone system; and facility inventory and inspection. Each section describes existing conditions and gives system recommendations where they are needed.

## **ROADS AND PARKING AREAS**

- The park currently has 1/10 mile of paved road and .29 miles of unpaved road.
- The park office has a paved parking area that is approximately 4,000 square feet and has seven parking spaces, one that is handicapped. There is an additional unpaved parking area of approximately 6,000 square feet located at the park office that is partially covered with crush-n-run.
- The maintenance area has a concrete pad and parking area approximately 5,000 square feet with six marked spaces.
- The picnic area has two parking lots, a primary and an overflow lot. Both are unpaved. The primary parking lot has a stone base, is approximately 20,000 square feet, and has space for about 50 vehicles. The overflow lot is grassed and approximately 20,000 square feet, with space for about 50 vehicles.
- The parking lot located on the north side of the Cape Fear River is unpaved. Some erosion is taking place, and the lot badly needs stabilization stone. Currently there is \$25,000 in place for grading and resurfacing this parking lot.
- The gravel entrance road is well maintained by the NC Department of Transportation, but the road is narrow and needs to be widened and paved.
- Currently \$1,000 is allotted to the NC Department of Transportation annually to maintain the unpaved roads in the park. The funds are used to add gravel and scrape the roads three times a year.

### **Recommendations for the Roads and Parking Areas**

The existing annual service agreement with the NC Department of Transportation is adequate for maintenance of the park roads. The gravel entrance road and day use parking lot should be paved. Park visitation and future facilities planned at this location should be taken into consideration before paving the area. Park staff has requested realignment to help control traffic and excess speeding. Paving and road realignment are

included in the project scope of the proposed capital improvement project to construct a visitor's center and make improvements to the picnic area.

## **SEWER FACILITIES**

There are currently six active sewer systems at Raven Rock. They are all considered residential systems with septic tank, distribution box, and drain field lines. It was not possible to uncover every tank and distribution box due to time constraints, but listed below is the best information that could be collected on the different systems:

1. Toilet Building (Building # 20-002) – This system has a 1500-gallon septic tank with four 110-foot drain lines. The drain lines seem to be functioning satisfactorily. The drain field is in a wooded area with trees growing over it. A riser has been installed at this location.
2. Maintenance Shop – This system has a 1000-gallon septic tank with two 60-foot drain lines. The drain lines seem to be functioning satisfactorily. There is no riser at this location.
3. Warehouse – This system has a 1000-gallon septic tank with two 60-foot drain lines. The drain lines seem to be functioning satisfactorily. There is no riser at this location.
4. Ranger Residence (Building # 20-018) – This system has a 1000-gallon septic tank with three 100-foot drain lines located in the front yard. The drain lines seem to be functioning satisfactorily. A riser has been installed at this location.
5. Superintendent Residence (Building # 20-021) - This system has a 1200-gallon septic tank with two or three drain lines of unknown length. The drain lines seem to be functioning satisfactorily. There is a riser installed at this location.
6. Alternate Ranger Residence Location – Mobile home occupied by a ranger is currently at this site. This system has a 1000-gallon septic tank with three 100-foot drain lines located in the front yard. A riser has been installed at this location.
7. Abandoned Trailer Site – No building is currently at this site and system is not being used. This system has a 1000-gallon septic tank with three drain lines of unknown length. This system is located downhill from the maintenance area and could be used as a back up system.
8. Vault toilets - There are currently four vault toilets located in the park. These are pump and carry style toilets and are in good condition.
9. Pit Toilet - Located on the north side of the Cape Fear River at the horse trail parking lot.

## **Recommendations for Sewer Facilities**

According to staff, it has been two years since any of the septic systems have been pumped. Each system should be scheduled for pumping within the next year. Risers should be added to the septic systems located at the Maintenance Shop and Warehouse.

The pit toilet located at the trailhead on the north side of the river should be removed and replaced with a flush toilet with septic tank and drain field. A capital improvement project that includes a new toilet building on the north side has been developed.

## **WATER SYSTEM**

Previously the park was served by seven wells located throughout the park, but since 1989, the park has been supplied water by Harnett County Public Utilities. All facilities located on the south side of the river, including the residences, are tied into the county system. There is currently no water at facilities located on the north side of the river.

All three ranger residences have been tied into the county water system. The residences have an option of using the private wells as a backup to the county system.

The distribution system is composed of ¾-inch to 4-inch PVC piping. There are approximately 2,200 linear feet of water line within the park.

### **Recommendations for the Water System**

Existing wells not in service should be properly abandoned and capped. Access to county water on the north side of the river requires adding approximately 1500 feet of water line adjacent to River Road. A request for information concerning future expansion of the county water system in this area has been made.

## **ELECTRICAL SYSTEM**

The park is supplied electrical service through South River Electrical Membership Corporation located in Dunn, North Carolina. The park has both underground and aboveground services. South River Electric Membership Corporation currently maintains the distribution system at no charge.

Aerial lines serve the ranger residences. All other electrical service is underground.

### **Recommendations for the Electrical System**

All electrical services within park boundaries should be installed underground. Lines will be placed underground as a part of the Visitor's Center & Picnic Area Expansion capital improvement project.

## **TELEPHONE SYSTEM**

There are two business telephones at the office and one public phone located on the side of the refreshment stand at the day-use area. All lines are maintained by Embarq. No changes are recommended at this time.

## **SUMMARY OF RAVEN ROCK STATE PARK ROAD AND UTILITY INVENTORY**

Most of the infrastructure is relatively new and therefore in good condition. The gravel entrance road and parking area are in fair shape. The power, water, sewer and telephone lines are in satisfactory condition. Routine maintenance of sewer drain fields and tanks should prevent future problems. Water valves may need to be replaced occasionally, but the distribution system should be good for another ten years. The road and parking areas should be paved as future visitor use facilities are built.

## FACILITY INVENTORY AND INSPECTION PROGRAM

Buildings and other structures in state parks are necessary to provide services to park visitors. These structures are essential for protecting public safety, health, and welfare while providing opportunities for outdoor recreation. They include infrastructure, such as roads, parking lots, trails, and systems for potable water, electrical distribution, and sewage treatment. They also include operational and recreational facilities, such as campgrounds, picnic areas, concession buildings, boardwalks, park offices, residences, pump houses, warehouses, barracks, maintenance shops, visitor centers, etc. These facilities must be properly maintained to provide for a safe, continuous, and quality park-use experience.

### Raven Rock State Park Building Inventory

Pictures and/or descriptions of the buildings and other structures currently in use at Raven Rock State Park follow:



**Figure VII-1. Ranger Residence # 20-021.** Built in 1920. 1675 square feet. Heated wood-frame structure used as Superintendent's residence. A capital improvement project has been developed to bring the old structure up to current standards, including utility improvements and the addition of a bathroom and detached carport.



**Figure VII-2. Ranger Residence # 20-018.** Built in 1980. 1213 square feet. Heated wood-frame structure with brick veneer. Guest bath partially remodeled and used as a laundry.  
**Tobacco Barn #20-019.** Built in 1950. Unheated wood-frame structure used for storage.





**Figure VII-3. Warehouse #20-028.** Built in 1998. 1422 square feet. Heated CMU building serves as the park warehouse.



**Figure VII-4. Maintenance Building #20-027.** Built in 1998. 1985 square feet. Heated CMU building used as maintenance office and shop.



**Figure VII-5. Small Engine Shop #20-026.** Built in 1994. 616 square feet. Heated wood-frame building used for lawn mower storage and repair.



**Figure VII-6. Vehicle Storage Building #20-029.** Built in 1998. 1512 square feet. Unheated, partially open CMU and metal post and beam structure used for vehicle storage.



**Figure VII-13. Park Office #20-025.** Built in 1992. 672 square feet. Heated, manufactured wood and metal frame mobile home used as the park office.



**Figure VII-14. Information Kiosk.**





**Figure VII-7. Above Ground Fuel Storage Tank**



**Figure VII-8. V-Crimp Tin Barn #20-023.** Built in 1960. 5000 square feet. Unheated wood post and beam structure used for storage.



**Figure VII-9. Canoe Camp Toilet #20-032.** Built in 1997. 82 square feet. Unheated, metal-stud frame structure has cement siding. The toilet is a vault, pump and haul type facility.



**Figure VII-10. Picnic Area Toilet Building #20-002.** Built in 1986. 436 square feet. Partially heated, wood-frame structure.



**Figure VII-11. Vending Machine Building #20-015.** Built in 1978. 88 square feet. Unheated wood-frame structure used to store public-use vending machines.



**Figure VII-12. Mobile Home Site.**

Barn and Storage Building #20-004. Built in 1950. The unheated wood-frame structure is used for storage. It is also called the Flee Barn.

North Side Pit Privy #20-009. Built in 1975. The eighteen square foot, unheated wood-frame structure is used as a primitive toilet facility.

Pumphouse #20-020. Built in 1980. The 208 square foot, heated concrete masonry unit structure is used for storage. Pump equipment was removed when the park was connected to the Harnett County water system.

Toilet Building #20-030. Built in 1997. Located at site three. The 82 square foot, unheated, metal stud frame structure has cement siding and contains a vault pump and haul toilet.

Toilet Building #20-031. Built in 1997. Located at site four. The 82 square foot, unheated, metal stud frame structure has cement siding and contains a vault pump and haul toilet.

Toilet Building #20-033. Built in 1997. Located at the wilderness camp. The 82 square foot, unheated, metal stud frame structure has cement siding and contains a vault pump and haul toilet.

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